WHAT IS CLAIMED IS:

1. An autofocus apparatus for performing a focusing operation using a frequency component of a video signal, comprising:

extracting means for extracting a frequency component of a prescribed band in the video signal; and

changing means for changing the band of the frequency component, which is extracted by said extracting means, in accordance with the number of pixels of the video signal.

2. The apparatus according to claim 1, wherein a plurality of said extracting means are provided, and said changing means selects a desired one of the extracting means from said plurality thereof and the band is changed using said desired extracting means.

3. The apparatus according to claim 1, wherein said extracting means comprises a digital filter having a coefficient that is variable.

4. The apparatus according to claim 1, wherein said extracting means includes first frequency component extracting means operable in a moving-picture photography mode and second frequency component extracting means operable in a still-picture photography mode;

said changing means changing the band by selecting one of said first frequ ncy component

extracting means and second frequency component extracting means.

5. The apparatus according to claim 1, wherein said changing means changes the band in accordance with zoom magnification of zoom processing when electronic zoom processing, in which the number of pixels of the video signal is changed, is executed.

6. The apparatus according to claim 1, wherein the frequency component is a high-frequency component.